

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY ALASKA
Fort Richardson, Alaska 99505-5000

United States Army Alaska Regulation 115-1

31 January 1999

Climatic, Hydrological, and Topographical Services

United States Army Alaska Weather Support

Summary. This regulation concerning brigade weather support has been revised. This regulation covers the 3d Air Support Operations Squadron/Weather Flight (3 ASOS/WE) weather service responsibilities and reciprocal support requirements of the United States Army Alaska (USARAK). Many significant changes have been made throughout this regulation. Revisions to this regulation include updated unit names, duty priorities, responsibilities, notification and recall, weather warning and advisory, and environmental and reporting requirements.

Applicability. This regulation applies to USARAK, the 172d Infantry Brigade (Separate) (172 SIB), to the respective subordinate commands, tenant commands, and Army Reserve and National Guard units located or operating on USARAK posts.

Impact on the New Manning System. This regulation does not contain information that affects the New Manning system.

Supplementation. Supplementation of this regulation is prohibited without prior approval from the Directorate of Plans, Training, Security, and Mobilization, USARAK Aviation, Attention: APVR-WPTM-AV.

Interim changes. Interim changes to this regulation are not official unless the Director of Information Management authenticates them. Users will destroy interim changes on their expiration date unless sooner superseded or rescinded.

Suggested improvements. This regulation's proponent agency is the Directorate of Plans, Training, Security, and Mobilization, USARAK Aviation. Users are invited to send comments and suggested improvements on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) directly to APVR-WPTM-AV.

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*This regulation supersedes United States Army Alaska Regulation 115-1, dated 31 March 1997.

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Chapter 1
General Information

1-1. Purpose

This regulation establishes 11th Operational Weather Squadron (11 OWS) (the Alaska Weather Operations Center (AWOC)) and 3 ASOS/WE weather service responsibilities to USARAK and subordinate elements. It further defines the reciprocal support requirements of USARAK and subordinate elements. This regulation covers Fort Richardson (including Bryant Army Heliport (BAHP)) and Fort Wainwright (including Wainwright Army Airfield (WAAF)) geographical areas. There is also a chapter on Fort Greely and Allen Army Airfield (AAAF) weather support. This regulation does not address contingency support.

1-2. References

a. Required publications.

(1) Air Force Instruction (AFI) 16-201 (Foreign Disclosure of Classified and Unclassified Military Information to Foreign Governments and International Organizations) is cited in paragraph 1-9.

(2) Army Regulation (AR) 95-1 (Flight Regulations) is cited in paragraphs 2-4a and 3-3b and in the glossary.

(3) AR 95-2 (Air Traffic Control, Airspace, Airfields, Flight Activities and Navigation Aids) is cited in paragraph 2-14a(1).

(4) AR 115-10 (Weather Support for the US Army) is cited in paragraphs 1-5a, 1-6g, and 5-5a(1).

b. Related publications. Related publications are merely a source of additional information. The user does not have to read them to understand this regulation.

(1) Field Manual (FM) 1-303 (Air Traffic Control Facility Operations and Training).

(2) Flight Information Publication, General Planning.

(3) Flight Information Publication, Supplement for Alaska.

(4) USARAK Regulation 115-3 (Forward Area Limited Observation Program).

c. Referenced forms.

(1) DA Form 2028 (Recommended Changes to Publications and Blank Forms) is cited in the suggested improvements statement.

(2) Defense Department (DD) Form 175-1 (Flight Weather Brief) is cited in paragraphs 2-4 and 3-3.

1-3. Explanation of abbreviations and special terms

The glossary explains the abbreviations and special terms used in this regulation.

1-4. Privacy Act

This regulation requires the collection and maintenance of some information (recall rosters) protected by the Privacy Act of 1974. Include a Privacy Act statement on each recall roster.

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1-5. General

a. AR 115-10 and United States Air Force, major command, and Air Force weather publications outline basic concepts and procedures. The 3 ASOS/WE at Fort Wainwright maintains applicable Army, major command, Air Force weather, and local directives for reference.

b. Weather forecasting is not an exact science. Forecast accuracy increases as the forecast event draws nearer. Generally, operational forecasts for decision-making purposes will not be issued earlier than 24 hours before a specific event. Forecasts beyond 24 hours are generally used for planning purposes only.

c. All units will report significant property or equipment damage instances or personnel injuries (other than frostbite and vehicle accidents) resulting from weather phenomena as soon as possible. Report them, through channels, to the resident weather station on the local post or base.

d. The 3 ASOS/WE provides weather support needed to any agency as part of an exercise evaluation. However, for flight safety, the duty forecaster and observer at Fort Wainwright will simulate evacuation of the weather station when solely part of an exercise. An oral review of their evacuation procedures is the limit of their participation. All other personnel in the Fort Wainwright weather station will participate to the fullest extent possible.

1-6. Weather support relationships

a. The AWOC at Elmendorf Air Force Base and the 3 ASOS/WE at Fort Wainwright are jointly responsible for providing weather support to USARAK and its subordinate elements. This regulation will define specific responsibilities throughout.

b. The AWOC provides terminal aerodrome forecasts (TAFs), weather warnings, and forecast weather advisories for WAAF and Fort Wainwright. Additionally, they provide warning, advisory, and briefing service for BAHP and Fort Richardson. They are also responsible for weather warning support to AAAF and Fort Greely. Finally, they assume responsibility from the 3 ASOS/WE for briefing support to WAAF and AAAF during periods when the 3 ASOS/WE is closed.

c. The 3 ASOS/WE operates a limited duty weather station at WAAF providing a basic weather watch and weather observations for WAAF. Weather briefing service is provided for both WAAF and AAAF. During periods when a 3 ASOS/WE forecaster is not on duty (see chap 2), responsibilities for Fort Wainwright weather briefings transfer to the AWOC.

d. No direct weather support is available at BAHP on Fort Richardson. An automated surface observation system provides weather observation support at BAHP. The AWOC provides weather briefings for aircraft flying out of BAHP. The AWOC issues warnings for BAHP and Fort Richardson. They also issue observed advisories for BAHP and Fort Richardson using near real-time observations from the above-mentioned surface observation system.

e. Per an interservice support agreement, the Army's Cold Region Test Center provides daily forecasts (Monday through Friday) for Fort Greely. When a forecaster is on duty, the 3 ASOS/WE gives flight weather briefings for AAAF at Fort Greely; the AWOC gives them when a 3 ASOS/WE forecaster is not on duty. The AWOC provides weather warning support to Fort Greely and AAAF.

f. Elmendorf Air Force Base Weather provides flight weather briefing support and seasonal weather briefings for the Alaska Regional Flight Center at Elmendorf Air Force Base. When Elmendorf Air Force Base Weather is closed, the AWOC assumes flight weather briefing responsibility for the Alaska Regional Flight Center.

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g. Weather data communications (circuits and terminal equipment) are a joint Air Force and Army responsibility. AR 115-10 outlines specific responsibilities.

1-7. Staff weather officer support

The AWOC commander serves as the staff weather officer (SWO) to the USARAK staff. Additionally, the AWOC will serve as the provider of weather services for the installation on Fort Richardson. The 3 ASOS/WE flight commander serves as the SWO to 172 SIB and all units assigned on Fort Wainwright and Fort Greely. Also, the 3 ASOS/WE flight commander will provide or arrange for support to meet the tactical weather support requirements of units subordinate to USARAK and the 172 SIB that are located on Fort Richardson.

1-8. Duty priorities

- a. Completing Emergency War Order taskings (3 ASOS/WE).
- b. Responding to aircraft and ground emergencies (3 ASOS/WE).
- c. Taking, disseminating, and recording surface observations (3 ASOS/WE).
- d. Answering pilot to METRO service (PMSV) calls (3 ASOS/WE).
- e. Disseminating weather warnings and advisories (AWOC).
- f. Disseminating pilot reports (PIREPS) (3 ASOS/WE).
- g. Providing mission control forecasts (3 ASOS/WE and AWOC).
- h. Preparing and issuing TAFs (AWOC).
- i. Providing flight weather briefings (3 ASOS/WE and AWOC).
- j. Providing other briefings (3 ASOS/WE and AWOC).
- k. Performing other duties.

1-9. Weather information release

Forward requests for weather data or information to the SWO. AFI 16-201 specifies the conditions under which meteorological support can be given to nonmilitary United States federal agencies, state and local government agencies, commercial organizations, or private individuals. However, the SWO will provide emergency requests for weather service from civilian aircraft or governmental agencies with coordination provided after-the-fact.

1-10. Forms

Governing regulations cover the DD, Air Force, Army, and Major Air Command forms used in routine duty performance. Contact the weather unit at the post of interest for help in determining form(s) usage and requirements.

1-11. Review requirements

This regulation is reviewed annually. Submit suggested or required changes, in writing, to the USARAK Aviation Office or 172 SIB SWO.

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Chapter 2**Fort Wainwright and Wainwright Army Airfield Weather Support****Section I****Forecasting Services****2-1. Operating hours**

a. The airfield's operating hours determine WAAF's forecasting hours. Normally, forecasting services are available from 0600 local time (L) to 2200L, Monday through Friday, except holidays. On request, forecasting and observing services may be extended to 24 hours per day, 7 days per week. For Fort Wainwright emergency support requirements, contact either the 3 ASOS/WE Chief, Weather Station Operations (CWSO) or SWO by calling the Fort Wainwright Emergency Operations Center (EOC) at 353-6666. The CWSO or SWO will then recall standby personnel as required.

b. Operating hours may change due to exercise commitments, training requirements, control tower operating hour changes, and holidays. Coordinate special support requirements that require normal duty hour changes at least 15 duty days ahead with the 3 ASOS/WE CWSO or SWO.

c. Temporary duty hour changes do not justify issuing a change to this regulation. A change will be issued if there is a permanent operating hour change that is not adequately covered in paragraphs a and b above.

2-2. Terminal aerodrome forecasts

a. The AWOC issues TAFs for Fort Wainwright during forecasting service hours. Table 2-1 contains specification criteria.

b. TAFs, scheduled or amended, will specify the time of occurrence (to the nearest whole hour), the duration, and intensity (where applicable) of the weather elements specified in table 2-1. Weather elements specified in the TAF are valid for a 5-mile radius from the center of the WAAF runway. When TAF remarks specify weather phenomena as being "in the vicinity (abbreviated VC)," these elements are expected within a 5- to 10-mile radius of the WAAF runway.

c. TAFs are normally issued at 0600L, 1200L, and 1800L and are valid for 24-hour periods. If the automated weather distribution system (AWDS) is nonoperational, backup measures will provide local dissemination of the TAF. Other agencies requiring a current forecast will contact the 3 ASOS/WE.

Table 2-1	
Terminal aerodrome forecasts specification criteria	
1. Ceiling and/or visibility increases to, exceeds, or decreases to less than any of the following values:	
Ceiling	Visibility
3000 feet	3 miles (4800 meters)
1500 feet	2 miles (3200 meters)
1000 feet	1 mile (1600 meters)
500 feet	1/2 mile (800 meters)
300 feet	-----
2. Wind.	
a. Speed change of 10 knots or more.	
b. Direction change of greater than 30 degrees when the predominant wind speed or gusts are expected to be more than 15 knots.	
3. Precipitation.	

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Table 2-1 Terminal aerodrome forecasts specification criteria—Continued
4. Thunderstorms.
5. Low level wind shear from surface to 2,000 feet above ground level.
6. Weather warning and advisory criteria.
7. Icing and turbulence, not associated with thunderstorms, from surface to 10,000 feet above mean sea level (MSL). Note: the turbulence forecasts are for Category II aircraft. However, the forecaster will tailor the turbulence forecast to the particular type of aircraft during the flight weather briefing.
8. The value of the lowest altimeter setting expected for the initial forecast period and each change group (BECMG) thereafter, excluding temporary conditions, drops more than .05 inches below the stated value.
9. Other conditions that, in the forecaster's opinion, are essential to adequately describe the expected weather.

d. Forecast amendments (see table 2-2) will be issued to ensure the TAF is representative of expected or actual conditions and contain all elements normally found in a scheduled TAF. However, they will only be issued—

(1) During WAAF operating hours.

(2) When a previously expected event does not occur by the specified hour, and is not expected to occur within the next 30 minutes.

(3) When an unforecasted change in conditions is expected to occur, or occurs, and is expected to last at least 30 minutes.

(4) For the remainder of the original TAF valid time, starting from the preceding hour.

Table 2-2 Terminal aerodrome forecast amendment criteria
1. An out of category ceiling/visibility condition. Categories are determined by the lower of the ceiling or visibility elements: a. Cig/Vsby > 3000 feet/3 miles (4800 meters). b. Cig/Vsby < 3000 feet/3 miles (4800 meters) to > 1000 feet/2 miles (3200 meters). c. Cig/Vsby < 1000 feet/2 miles (3200 meters) to > 500 feet/1 mile (1600 meters). d. Cig/Vsby < 500 feet/1 mile (1600 meters) to > 300 feet/1/2 mile (800 meters). e. Cig/Vsby < 300 feet/1/2 mile (800 meters).
2. An error in forecast winds of— a. 10 knots or more (including gusts). b. 30 degrees or more when the predominant wind speed (including gusts) is, or is forecast to be, more than 15 knots.
3. Precipitation when— a. The forecaster considers the occurrence or nonoccurrence of precipitation (other than ice crystals) to be operationally significant. b. Unforecasted freezing precipitation begins or ends. c. Occurrence requires issuing a weather advisory or warning
4. The beginning or ending of light or greater icing below 10,000 feet MSL and not associated with thunderstorms.
5. The beginning or ending of moderate or greater turbulence below 10,000 feet MSL and not associated with thunderstorms.

Table 2-2**Terminal aerodrome forecast amendment criteria—Continued**

6. Established weather warning criteria— a. Occur, or are expected to occur, during the forecast period but were not specified in the forecast. b. Were specified in the forecast, but are no longer occurring or expected to occur in the forecast period.
7. Low level wind shear (not associated with thunderstorms) below 2000 feet is reported.
8. Forecasted low level wind shear (not associated with thunderstorms) below 2000 feet is no longer expected to occur.
9. The actual altimeter setting falls more than .05 inches lower than the lowest value forecast for that time period.
10. Forecasters may amend the TAF at any time to ensure the forecast is representative of actual or expected conditions.

e. In the interest of flying safety, 3 ASOS/WE forecasters are authorized to deviate from the TAF when providing weather briefings if current knowledge of weather indicates the TAF is likely to be in error.

2-3. The terminal aerodrome forecast codes

a. Table 2-3 shows the format for TAFs transmitted locally over the AWDS.

b. TAFs will be amended based on the criteria specified in table 2-2. An amended TAF will include the contraction “AMD” in the TAF’s initial conditions line. When amendments are required, the start time of the forecast period in the TAF’s initial conditions section will be changed to reflect the amendment time.

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Table 2-3
Terminal aerodrome forecast format and code explanations
Formats
PAFB FCST 20-20 21015G25KT 7 -SHRA FEW030 SCT050 BKN100 ALSTG 29.73INS VCTS
TEMPO 20-22 3 TS BKN030CB
BECMG 22-23 29007KT 7 NSW FEW050 ALSTG 29.70INS T27/02Z T14/12Z
Code Explanations
<p><u>PAFB</u>—Station identifier. The first forecast group of the TAF defines the initial conditions expected during the forecast period. If significant changes are expected during the period, the TAF will contain subsequent TEMPO or BECMG groups.</p> <p><u>FCST</u>—Indicates the product is a TAF.</p> <p><u>20-20</u>—Indicates this is a 24-hour forecast, beginning at 2000 Zulu and ending at 2000 Zulu on the following day.</p> <p><u>21015G25KT</u>—Wind code group. First three digits (210) are direction in degrees. Next two digits (15) are speed in knots. The letter “G” will be used when criteria for wind gusts are being met; followed by the gust speed (25).</p> <p><u>Z</u>—Visibility in statute miles.</p> <p><u>-SHRA</u>—This is the code group for forecast type of weather. -SHRA would indicate light rain showers are forecast (use of the “-” symbol indicates light intensity). Other weather code groups are used to specify various types of forecast weather. Weather in this code group is being forecast to occur within 5 miles of the airfield. Note: “NSW” is the weather code for No Significant Weather.</p> <p><u>FEW030 SCT050 BKN100</u>—Cloud code groups. Will be used to indicate the forecast for amount of cloud occurring at a given layer and the height of the layer in hundreds of feet. Clear skies will be indicated as “SKC”.</p> <p><u>ALSTG 29.73</u>—Altimeter setting in inches. Note: the altimeter setting group will be followed by additional remarks. These may include, but are not limited to: forecast for events expected to occur within the vicinity of the airfield (5 to 10 miles away), maximum and minimum temperature forecasts (degrees Celsius), and changes to single elements expected to occur during the valid time of the forecast.</p> <p><u>TEMPO</u>—Forecast elements specified within a TEMPO group are expected to occur less than 50 percent of the time during the valid period.</p> <p><u>20-22</u>—Valid period of the TEMPO forecast. In this example, the conditions that follow are expected to occur temporarily between 2000 Zulu and 2200 Zulu.</p> <p><u>BECMG</u>—These groups are used to indicate a change in the predominant weather conditions specified in previous sections of the TAF.</p> <p><u>22-23</u>—This indicates the conditions that follow are forecast to occur between 2200 and 2300 Zulu. The forecast conditions are expected to persist until the time period specified in any subsequent BECMG group. If there are no additional BECMG groups in the TAF, conditions are forecast to persist until the end of the 24-hour period specified in the initial conditions group of the TAF.</p>

2-4. Flight weather briefings

a. DD Form 175-1 (Flight Weather Brief) briefings are normally given for Instrument Flight Rules (IFR) missions. AR 95-1 outlines the requirements for a weather briefing. DD Form 175-1 weather briefings can only be given to a pilot or copilot scheduled to be part of the briefed flight.

b. Visual Flight Rules (VFR) local briefings are normally provided for all VFR flight plans. Safety-of-flight concerns dictate the pilot or copilot should be the one who obtains the flight briefing.

c. Out-of-station weather briefing service is available for staff briefings and large scale aircraft movements. Coordinate them with the 172 SIB SWO at least 24 hours in advance.

d. The 3 ASOS/WE accepts long distance telephone calls for weather briefings from military aircrews that do not have local weather facilities available.

e. Briefing documentation is:

(1) Defense Department Form 175-1 briefings. The air crew member receiving the briefing receives one completed copy of DD Form 175-1 and the 3 ASOS/WE maintains the carbon copy on file for 90 days.

(2) Visual Flight Rule briefings. VFR briefings are entered on a local log form and kept for 90 days.

f. The AWOC will provide flight weather briefings to garrison and transient aircrews when there is no 3 ASOS/WE forecaster available. The Airfield Operations pilot briefing area has the telephone numbers and other materials needed to fill out blank DD Forms 175-1 (the Flight Information Publication Supplement for Alaska also contains the telephone numbers). Local aviation elements are required to obtain the needed DD Forms 175-1 for use in their respective operations areas.

g. Obtain flight weather briefings, in times of urgency, from the 3 ASOS/WE by PMSV radio on 128.8 megahertz (MHz) very high frequency (VHF) or 342.5 MHz ultra high frequency (UHF).

2-5. Pilot to METRO service

a. The 3 ASOS/WE operates a PMSV radio on frequencies 128.8 MHz or 342.5 MHz during normal operating hours. The call sign is "Wainwright METRO". Eielson Air Force Base Weather and Elmendorf Air Force Base Weather have 24-hour PMSV service available. Contact them within range limitations on 344.6 MHz. The call signs are "Eielson METRO" and "Elmendorf METRO" respectively.

b. Due to the scarcity of weather data in Alaska, when time permits, pilots are requested to provide reports about conditions encountered on their flight. Report the conditions to a weather observer or forecaster at the destination, or through PMSV radio. Elements of primary importance to be reported are:

(1) Aircraft type.

(2) Time and location.

(3) Flight level (mean sea level (MSL)).

(4) Flight level temperature and visibility.

(5) Encounters of icing, turbulence, or low-level wind shear.

(6) Cloud tops and bases (MSL).

(7) Thunderstorms, tornadoes, hail, waterspouts, and funnel clouds.

(8) Squall lines, wide-spread dust storms, or sandstorms.

(9) Volcanic ash cloud.

(10) Any remarks concerning material the pilot feels would be of concern to other aviators.

2-6. Weather watches

a. The AWOC will issue weather watches for WAAF.

b. Table 2-4 contains weather watch criteria.

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Table 2-4 Weather watch criteria		
Criteria	Lead Time	Definition
Lightning	30 Minutes	Lightning within 5 nautical miles
Note: Weather watches for lightning will only be issued during periods when WAAF is open.		

2-7. Weather warnings

- a. Table 2-5 contains weather warning criteria.

Table 2-5 Weather warning criteria		
Criteria	Lead Time	Definition
High Winds	1 Hour	Surface winds, steady or gusting, equal to or exceeding 35 knots.
Freezing Precipitation	1 Hour	Freezing rain or drizzle of any intensity.
Heavy Snow	2 Hours	Snow, 4 inches in a 12-hour period.
Extreme Cold	1 Hour	-40 Fahrenheit or colder temperature.
Lightning	Observed	Lightning is observed within 5 nautical miles
Note 1: Each weather warning will state the criteria, the valid period (in both Zulu and local time), and the maximum or minimum value expected.		
Note 2: Lightning warnings will only be issued when WAAF is open.		
Note 3: The 3 ASOS/WE has a Doppler weather radar that can determine how close thunderstorm cells are to the airfield. The radar will be monitored to determine the thunderstorm's distance and speed of movement. If it is within 5 nautical miles, a warning will be issued for lightning, even if lightning has not been observed. It will be canceled when the potential for thunderstorms within 5 nautical miles no longer exists.		

- b. WAAF weather warnings are valid for within a 5-nautical mile radius of the airfield complex center.
- c. The AWOC will issue all WAAF weather warnings, except for the observed lightning advisory that the 3 ASOS/WE issues.
- d. In the interest of flying safety and resource protection, 3 ASOS/WE forecasters are authorized to issue weather warnings for any criteria if current knowledge of weather conditions indicates the event is likely to occur.
- e. The AWOC issues WAAF weather warnings by notifying the Fort Wainwright EOC (Defense Switch Network (DSN) 353-6666). During periods when a 3 ASOS/WE forecaster is not on duty, the EOC will also contact either the SWO or CWSO for wind and freezing precipitation warnings. When these criteria are being forecast, the SWO or CWSO will direct standby personnel to report for duty. The AWOC forecaster will specify the—
- (1) Warning number.
 - (2) Valid period in both Zulu and local times.
 - (3) Criteria expected, as well as the amounts and intensities (as applicable).
- f. The EOC, upon weather warning notification, further disseminates the warning as outlined in appendix A.

- g. The standby forecaster, when recalled will—
 - (1) Report to the weather station.
 - (2) Acquaint himself/herself with the synoptic situation by calling the AWOC duty forecaster.
 - (3) Call the EOC to inform them they are present for duty.
 - (4) Provide help and answer questions for personnel requiring information about the situation.
- h. Weather warnings will be disseminated per appendix A.
- i. Warnings are not canceled solely due to weather station closure. They will be canceled by the AWOC when the expected criteria—
 - (1) Occur and are not expected to occur again.
 - (2) Are not expected to occur if previously forecast.
- j. When the AWOC issues a warning, a 3 ASOS/WE forecaster will remain on duty until the criteria specified in paragraph 2-7i(1) or (2) are met. Exception: the SWO or CWSO may release the forecaster after a weather warning for either temperature or snow accumulation is issued.

2-8. Weather advisories

- a. The AWOC is responsible for issuing forecasted weather advisories. The 3 ASOS/WE is responsible for issuing observed advisories.
- b. In the interest of flying safety and resource protection, 3 ASOS/WE forecasters are authorized to issue weather advisories for any criteria if current knowledge of weather conditions indicates the event is likely to occur.
- c. Table 2-6 contains weather advisory criteria.
- d. WAAF advisories will be issued only during the periods the 3 ASOS/WE forecaster is on duty.
- e. Advisories are valid for a 5-nautical mile radius of the center of the WAAF airfield complex, for the time period and criteria specified in the advisory.
- f. The AWOC will cancel forecast advisories when the criteria are no longer occurring and are not expected to reoccur.
- g. The 3 ASOS/WE will issue observed advisories as the criteria specified occur and will cancel them when the criteria are no longer occurring.
- h. Advisories are not monitored after station closing. Advisories for criteria still occurring at station closing will remain in effect and are reevaluated upon resumption of services.

2-9. Weather forecast, advisory, and warning dissemination

- a. TAFs, weather advisories, and warnings are simultaneously transmitted to users. Backup telephone calls for advisories and warnings are made to the control tower and the EOC.
- b. During system outages, advisories and warnings will be telephoned to Base Operations, the control tower, and the EOC. Additionally, the TAF will be telephoned to the control tower.

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Table 2-6 Weather advisory criteria		
Criteria	Lead Time	Definition
Cold	1 Hour	-20 Fahrenheit or colder equivalent chill temperature (ECT).
High Winds (Note 2)	Observed	Surface winds, steady or gusting, equal to or exceeding 25 knots but less than 35 knots.
Snow	2 Hours	2 inches but less than 4 inches in a 12-hour period.
Wind (Note 2)	Observed	Wind gust spread between maximum and minimum instantaneous wind speed is equal to or greater than 15 knots.
Wind Shear (Note 2)	Observed	Drastic wind speed or directional change below 2,000 feet above ground level within 5 nautical miles.
Note 1: Each weather advisory will state the criteria, the valid time period (in both Zulu and local time), and the maximum value expected (as applicable).		
Note 2: The presence of thunderstorms implies the possibility of localized, strong, gusty winds and wind shear. Advisories for these events will not be issued if their occurrence is expected to be strictly the result of thunderstorms.		

2-10. Other forecasting services

a. Daily weather forecast and outlook.

(1) The 3 ASOS/WE prepares a weather outlook each morning (except weekends and holidays) and faxes it to requesting agencies at battalion level and above. Staffing constraints at the 3 ASOS/WE preclude having this service available for all units. Units desiring this service should check with their administrative sections to see if a copy of this product is already available before requesting duplicate services from the 3 ASOS/WE.

(2) Distribution will normally be complete by 0615, depending on duty priorities at the 3 ASOS/WE.

b. Automatic telephone answering device. As a service to Fort Wainwright personnel, the 3 ASOS/WE operates an automatic telephone answering device. The recording is for nonoperational use and can be accessed by calling the telephone number listed in the post telephone book. Duty priorities permitting, it is updated at 0630L, 1230L, and 1830L. The recording covers—

- (1) Weather conditions at the time of the recording.
- (2) A plain-language forecast for the upcoming 24 hours.
- (3) An extended outlook.

2-11. Alternate operating location

If events render the 3 ASOS/WE incapable of operating from Building 1558, Wainwright Weather will relocate to Building 1595.

Section II Observing Services

2-12 Operating hours

a. WAAF's observing hours are determined by the airfield's operating hours. Normally, observing services are available from 0600L to 2200L, Monday through Friday, except holidays. On request, observing services may be extended to 24 hours per day, 7 days per week. For Fort Wainwright

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emergency support requirements, contact either the 3 ASOS/WE CWSO or SWO by calling the Fort Wainwright EOC at 353-6666. The CWSO or SWO will then recall standby personnel as required.

b. Operating hours are subject to change due to exercise commitments, training requirements, changes in control tower operating hours, and holidays. Changes in observer duty hours should be coordinated at least 48 hours ahead with the USARAK SWO or by calling the 3 ASOS/WE CWSO. The 3 ASOS/WE notifies Eielson Air Force Base Weather of 3 ASOS/WE operating hour changes. Temporary duty hour changes will not be published as an official change to this regulation, but the 3 ASOS/WE will issue an official change whenever there is a permanent operating hour change.

2-13. Basic weather watch

a. The 3 ASOS/WE operates under the basic weather watch concept. Weather observers take, encode, and disseminate observations on an hourly basis during scheduled duty hours. They also take, encode, and disseminate observations that meet special criteria between the scheduled hourly observations. Table 2-7 contains the criteria for special weather observations.

b. Local observations are primarily taken to report changes in conditions significant to airfield operations but not meeting special criteria. Local observations are transmitted to local users only. Table 2-8 contains local criteria for Fort Wainwright.

c. Because the weather observers at WAAF are required to perform other duties, there are times when the weather observer does not immediately notice weather condition changes. This can result in 5- to 10-minute delays between the time weather conditions change and the observer notices (or is made aware of) the change and then takes, encodes, and disseminates the needed observation. A cooperative weather watch (see para 2-14), if conducted faithfully, prevents needless delays in reporting weather condition changes and otherwise enhances flying safety.

d. The 3 ASOS/WE provides a basic, WAAF weather watch. This requires weather observers to recheck weather conditions at no-more-than-20-minute intervals when any of the conditions listed below are occurring, or are forecasted to occur, within 1 hour.

(1) Ceiling 1,500 feet or less.

(2) Visibility 3 statute miles (4800 meters) or less.

(3) Precipitation (any form).

(4) Fog or mist.

e. Besides the above, the observer will remain alert for any other weather condition changes that may require a special or local observation (see tables 2-7 and 2-8).

2-14. Cooperative weather watch

a. To enhance WAAF weather observations quality, control tower personnel will provide assistance to the weather observer/forecaster by—

(1) Becoming qualified to take limited weather observations as required by AR 95-2.

(2) Coordinating with the 172 SIB SWO whenever changes in the limited weather observer training program are needed.

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(3) Notifying the weather observer/forecaster of weather condition changes that have occurred since the last observation and relaying PIREPS. This information includes, but is not limited to—

- (a) Cloud appearance lower than previously reported.
- (b) A start, stop, or change in precipitation character.
- (c) Visibility increase or decrease (especially when visibility less than 4 miles).
- (d) Observing lightning or hearing thunder.
- (e) Turbulence reports.
- (f) Icing reports.
- (g) Low-level wind shear reports.

Table 2-7 Fort Wainwright special observations
1. Special observations report significant changes in weather elements at units required and scheduled to transmit them. They are identified as "SPECI" in the observation header.
2. Observations meeting special criteria, but encoded at the time of scheduled hourly observations, are "Record Specials" and are identified as "METAR" in observation header.
3. Special observations are transmitted first to local agencies and then longline by communications circuits.
4a. Ceiling. The ceiling is observed to form below, decrease to less than, or if below, increase to equal or exceed: 1) 3,000 feet; 2) 1,500 feet; 3) 1,000 feet; 4) 800 feet; 5) 700 feet; 6) 500 feet; or 7) 300 feet.
4b. Visibility. The visibility is observed to fall below, or if below, increase to equal or exceed: 1) 3 miles (4800 meters), 2) 2 3/4 miles (4400 meters), 3) 2 1/2 miles (4000 meters), 4) 2 1/4 miles (3600 meters), 5) 2 miles (3200 meters), (6) 1 3/4 miles (2800 meters), 7) 1 1/2 miles (2400 meters), 8) 1 1/4 mile (2000 meters), 9) 1 (1600 meters), 10) 3/4 mile (1200 meters), or 11) 1/2 mile (0800 meters).
4c. Visibility. When weather and the air traffic control tower are observing different visibility values and either agency is observing visibility of less than 4 miles (4800 meters).
4d. Sky condition. A cloud layer or obscuring phenomena aloft is observed below 800 feet and was not reported in the previous observation.
4e. Runway visual range (RVR). The RVR for Runway 24 decreases to less than, or if below, increases to equal or exceed 2400 feet.
4f. Thunderstorm. If a thunderstorm: 1) begins, or 2) ends (when conditions no longer exist for thunderstorms).
4g. Tornado, funnel cloud, or waterspout. When a tornado, funnel cloud, or waterspout: 1) is observed by station personnel, or 2) disappears from the sight of station personnel.
Table 2-7 Fort Wainwright special observations—Continued
4h. Wind and wind shifts. When: 1) the occurrence of a squall (when wind speed increases by at least 16 knots and sustains a speed of 22 knots or greater for at least 1 minute); or 2) any wind direction change of 45 degrees or more in under 15 minutes, when wind speed throughout the shift is 10 knots or more.
4i. Precipitation. When: 1) freezing precipitation or ice pellets begin, end, or change in intensity; 2) hail begins or ends; or 3) any other type of precipitation begins or ends. Note: Except for freezing rain, freezing drizzle, hail, and ice pellets, a special observation is not required for changes in type (snow to rain) or the beginning or ending of one type while another is still in progress (rain to snow and rain mixed).

4j. Runway conditions. Runway condition changes are determined by Airfield Operations. (1) Normally consist of runway surface condition (RSC). This is an averaged decelerometer reading in two digits if snow and/or ice is observed on the runway. (2) When Airfield Operations is closed and the runway is not completely dry, "RCRNR" will be transmitted longline only. (3) Wet runway is encoded as "WR". (4) Transmitted locally and longline only when a change in condition is determined.
4k. When notified of a nuclear accident.
4l. Any time volcanic ash is observed suspended in the sky.
4m. Upon resumption of observing service anytime there has been an interruption in service of 15 minutes or more.
4n. Any other meteorological situation that, in the observer's opinion, is critical to aircraft operations safety.
4o. Single element specials are authorized to be taken for tornado activity.

b. Upon weather change notification from the tower controller, the weather observer visually checks to determine if a local or special weather observation is required.

c. Upon notification of PIREPS that contain the criteria specified above, the forecaster will issue weather advisories or warnings as required.

d. The weather station will disseminate PIREPS received from other sources to the tower.

e. The tower and Airfield Operations personnel will determine airfield status (VFR, IFR, or below minimums) based on the most current weather observations.

Table 2-8

Fort Wainwright local observations

1. Aircraft mishap. Taken immediately following an aircraft mishap notification or sighting at or near the station, unless there has been a METAR or SPECI observation taken since the mishap occurred. Note: Aircraft mishap observations will not be taken for in-flight emergencies. However, the observer will meteorologically watch activities to ensure maximum support possible to the aircraft in distress.
2. Altimeter setting. The altimeter setting will be recalculated at a frequency not exceeding 35 minutes since the last calculation, or upon the request of any supported agency.
3. RVR. a. When conditions for reporting RVR are first observed (1 mile/1600 meters) and when these conditions are observed to no longer exist. b. When RVR is first determined as unavailable (such as RVRNO) for the runway in use and when it is determined that the "NO" report is no longer applicable, providing the RVR reporting conditions exist. c. When RVR for the active runway is observed to decrease to less than, or if below, increases to equal or exceed: (1) 6,000 feet (1830 meters). (2) 5,000 feet (1520 meters). (3) 4,000 feet (1220 meters).
5. For any meteorological situation that, in the opinion of the observer, is operationally significant.

2-15. Operating limitations

a. The official 3 ASOS/WE weather observing site is approximately 50 meters south of Building 1558. However, parts of the observations are encoded using data obtained from instrumentation located elsewhere. This equipment is—

(1) Near the approach end of the Runway 24 for runway visual range (RVR) computations.

(2) Near the top of Beacon Hill (approach end of Runway 24) for measured ceiling heights.

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(3) Near the center of the runway for wind, temperature, and dew point.

b. Table 2-9 lists the existing limitations that hinder our ability to accurately observe some weather phenomena from the official observation point. The directions are magnetic.

Note: The presence of distant hills and mountain ranges visible from the east through the west allow for the reporting of visibility values exceeding 20 miles.

Table 2-9 Observer's line-of-sight obstructions	
Degrees (Magnetic)	Obstruction Description
350 to 020	A tree line along the hills restricts the observer's line-of-sight to 1 1/2 miles with the exception of a small sector from 005 to 010 degrees that allows unrestricted visibility to 6 miles.
020 to 050	The observer's line-of-sight is restricted to 3/8 of a mile due to buildings and Hangar 1.
050 to 090	The observer's line-of-sight improves but is restricted to 1 3/4 miles due to small hills at the approach end of the runway. The tree line lowers toward 090 degrees, which allows a line-of-sight to 2 1/2 miles.
090 to 100	The observer's line-of-sight is 12 miles.
100 to 220	The observer's line-of-sight is restricted to approximately 1 mile due to buildings and the tree line. Some gaps between buildings allow a line-of-sight to 2 miles.
220 to 250	The observer's line-of-sight is 20 miles.
250 to 315	The observer's line-of-sight is restricted by the control tower and Building 1565. However, occasional glimpses of higher terrain allow a clear line-of-sight to 20 miles.
315 to 350	Buildings restrict the line-of-sight to 1/16 of a mile.

2-16. Weather observation dissemination

a. During tower operating hours, weather observations are simultaneously transmitted to all airfield users.

b. Backup dissemination will be by telephone and only to the control tower. Other agencies requiring a current weather observation will call the 3 ASOS/WE observer.

c. All observations disseminated telephonically will be read back by the receiver to the 3 ASOS/WE observer.

2-17. Weather observation codes

a. Table 2-10 shows the format for full element observations transmitted locally.

b. Besides "METAR" and "SPECI" observations, certain circumstances will require the observer to take and disseminate a local observation. Table 2-8 lists local observation requirements. Depending on the circumstances necessitating a local observation, it may include all observed weather elements or only a single element. Reported elements will conform to the same observation code requirements used for "METAR" and "SPECI" observations.

Table 2-10**Full element observation format and weather observation code explanations**

Format
PAFB METAR 2058Z 21015G25KT 7 FEW030 SCT050 BKN100 77/48 ALSTG 29.73
Code Explanations
<p><u>PAFB</u>—Station identifier.</p> <p><u>METAR</u>—Indicates the observation type. A scheduled hourly record or record special observation will be identified as “METAR”. An unscheduled special observation will be indicated as “SPECI”.</p> <p><u>2058Z</u>—Zulu time of the observation.</p> <p><u>21015G25KT</u>—Wind code group. First three digits (210) are direction in degrees. Next two digits (15) are speed in knots. The letter “G” will be used when criteria for wind gust are being met; followed by the gust speed (such as 25).</p> <p><u>7</u>—Visibility in statute miles.</p> <p><u>FEW030 SCT050 BKN100</u>—Cloud code groups. Will be used to indicate the amount of cloud occurring at a given layer and the layer’s height in hundreds of feet. Clear skies will be indicated as “SKC”.</p> <p><u>77/48</u>—Temperature (77 degrees Fahrenheit) and dew point (48 degrees Fahrenheit).</p> <p><u>ALSTG 29.73</u>—Altimeter setting in inches. Note: the altimeter setting group will be followed by additional remarks. These may include, but are not limited to: thunderstorm positions and movement, pressure altitude values, Fahrenheit to Celsius temperature conversions, and the observer’s initials.</p>

Section III**Reciprocal Support Responsibilities****2-18. 172d Infantry Brigade (Separate) commander**

The 172 SIB commander—

- a. Provides the Fort Wainwright EOC with a list of applicable telephone numbers to call to support the weather advisory and/or warning dissemination as outlined in appendix A.
- b. Provides barracks space as required for personnel attached to the 3 ASOS/WE.

2-19. 4th Battalion/123d Aviation Regiment commander

The 4th Battalion, 123d Aviation Regiment commander—

- a. Coordinates in-garrison and deployed weather support requirements with the 172 SIB SWO (Fort Wainwright weather station) at least 15 days before needed support. This includes all training periods (such as reverse cycle training) where weather support is required beyond normal weather station operating hours (see chap 2, sec 1). This notification procedure also applies whenever local “no-fly” days are scheduled. The 15-day notification ensures proper shift work scheduling at the Fort Wainwright weather station.
- b. Provides all logistical support for any weather personnel deployed to support the 4th Battalion, 123d Aviation Regiment.

2-20. Fort Richardson Command Operations Center commander

The Command Operations Center (COC) commander notifies the USARAK SWO when accidents, mishaps, and/or events occur in which weather, weather services, weather personnel, or weather resources are involved.

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2-21. Wainwright Army Air Field Operations chief

The Airfield Operations chief—

- a. Establishes a policy that verifies pilots have received a flight weather briefing before filing a flight plan.
- b. Promptly notifies the 3 ASOS/WE of all aircraft emergencies, precautionary landings, and military aircraft mishaps that are reported to him/her.
- c. Provides runway condition readings (RCRs) and runway surface conditions (RSCs) to the 3 ASOS/WE when opening the airfield and as they change, for inclusion in weather observations and longline dissemination into the Automated Weather Network.
- d. Notifies the 3 ASOS/WE of dignitary diversions designated code 3 or higher (as defined in Flight Information Publication, General Planning).
- e. Notifies the 3 ASOS/WE of the expected arrival of code 3 or higher dignitaries at least 1 1/2 hours before the scheduled landing. Notification will be through the 3 ASOS/WE CWSO, duty forecaster, duty observer, or SWO.
- f. Orders various flight information publications, maps, and guidance as requested by the 3 ASOS/WE.
- g. Forwards changes in weather communications/services availability and information, as provided by the 3 ASOS/WE, to appropriate agencies for inclusion in flight information publications.
- h. Notifies the 3 ASOS/WE of changes in control tower operating hours for local training events (such as late night vision goggle training, very important person flights, etc.).

2-22. Control tower commander

The control tower commander—

- a. Relays PIREPS, as they are received and time permits, to the duty observer/forecaster.
- b. Provides tower and flight control orientation to newly assigned weather personnel.
- c. Provides a cooperative weather watch as defined in paragraph 2-14.
- d. Provides the 3 ASOS/WE with the names and desired training date/time for new controllers assigned to operations at WAAF who require nonweather personnel certification per FM 1-200.
- e. Provides the runway light setting and the applicable runway's status upon opening and closing of operations by control tower personnel and will report changes to the 3 ASOS/WE as they occur.

2-23. Fort Wainwright Safety Office

The Fort Wainwright Safety Office chief notifies the 3 ASOS/WE commander of all mishap investigations it undertakes if weather service or weather conditions might have played a part in the mishap's occurrence.

2-24. Brigade Artillery Meteorological Section chief

The Brigade Artillery Meteorological Section chief—

- a. Passes along upper air observations to the deployed 3 ASOS/WE weather team.

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b. Directs coordination between the Brigade Artillery Meteorological Section noncommissioned officer in charge and the deployed 3 ASOS/WE officer or noncommissioned officer in charge as authorized.

Chapter 3

Fort Richardson, Bryant Army Heliport, and the 207th Infantry Group Infantry Group (Army National Guard) Weather Support

Section I

Observing Services

3-1. Operating hours

An automated weather observation station provides BAHP weather observation support. These observations are near real-time and are available to weather support personnel at the AWOC.

Section II

Forecasting Services

3-2. Terminal aerodrome forecasts

No TAF is issued exclusively for BAHP. However, BAHP falls within a 5-nautical mile radius of Elmendorf Air Force Base. This allows the TAF written for Elmendorf Air Force Base to be used as the basis for BAHP aviation weather support.

3-3. Flight weather briefings

a. The AWOC accommodates all requests for flight weather briefings on a first-come-first-serve basis, as determined by their duty priorities.

b. IFR local flying area flights and all flights outside the local flying area normally receive DD Form 175-1 briefings. AR 95-1 outlines the requirements for a weather briefing. Only pilots or copilots scheduled to be part of a briefed flight can receive DD Form 175-1 weather briefings.

c. VFR flight plans normally receive VFR local weather briefings and anyone flying that flight may receive them. However, because safety is a primary concern in all flight operations, the pilot or copilot should be the one to obtain the flight briefing.

d. Any Fort Richardson/BAHP customer, either active duty or Alaska Army National Guard, who requires "stand-up" weather or climatological briefing support should request these services from the AWOC.

e. Documentation requirements include:

(1) Defense Department Form 175-1. One completed copy will be provided to the aircrew member receiving the briefing and the carbon copy will be kept at AWOC for 90 days.

(2) Visual Flight Rule briefings. VFR briefings are entered on a local form at the AWOC and kept for 90 days.

3-4. Pilot to METRO service

a. Elmendorf Air Force Base (Elmendorf METRO) has 24-hour PMSV available, within range limitations, on 344.6 MHz.

b. Due to the scarcity of weather data in Alaska, when time permits, pilots are requested to provide reports about conditions encountered on their flight (PIREPS) to a weather observer or forecaster at their destination, or by pilot to forecaster radio. Elements of primary importance to be reported are:

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- (1) Aircraft type.
- (2) Time and location.
- (3) Temperature and visibility at flight level.
- (4) Icing, turbulence, or low-level wind shear encounters.
- (5) Cloud tops and bases.
- (6) Thunderstorms, tornadoes, hail, waterspouts, and funnel clouds.
- (7) Squall lines, wide-spread dust storms, or sandstorms.
- (8) Volcanic ash clouds.
- (9) Any remarks concerning material the pilot feels would be of concern to other aviators.

3-5. Weather watches

- a. Weather watches for Fort Richardson/BAHP will be issued by the AWOC.
- b. Table 3-1 contains weather watch criteria.

Table 3-1 Weather watch criteria		
Criteria	Lead Time	Definition
Lightning	30 Minutes	Lightning within 5 nautical miles
Note 1: Weather watches for lightning will only be issued during normal duty hours.		

3-6. Weather warnings

- a. Table 3-2 contains weather warning criteria.

Table 3-2 Fort Richardson weather warning criteria		
Criteria	Lead Time	Definition
High Winds	1 Hour	Surface winds, steady or gusting, equal to or exceeding 35 knots.
Freezing Precipitation	1 Hour	Freezing rain or drizzle of any intensity.
Heavy Snow	1 Hour	Snow, 3 inches in a 12-hour period.
Extreme Cold	1 Hour	Equivalent chill temperature of -20 Fahrenheit or colder.
Lightning	Observed	Lightning is observed within 5 nautical miles.
Notes: 1. Each weather warning will state the criteria, the valid period (in both Zulu and local time), and the maximum value expected. 2. Lightning warnings will only be issued during normal duty hours. 3. The AWOC has Doppler weather radar that can determine how close thunderstorm cells are to the airfield. The radar will be monitored to determine the thunderstorm's distance and speed of movement. If it is within 5 nautical miles, a warning will be issued for lightning, even if lightning has not been observed. It will be canceled when the potential for thunderstorms within 5 nautical miles no longer exists.		

- b. Weather warnings for BAHP are valid for within a 5-nautical miles radius of the airfield complex center.

- c. The AWOC forecaster will determine and specify the—
 - (1) Warning number and the expected event.
 - (2) Valid period in both Zulu and local times.
 - (3) Criteria expected, as well as the amounts and intensities (as applicable).
- d. Warnings will be disseminated to—
 - (1) Agencies with an AWDS drop.
 - (2) The Fort Richardson COC (384-6666).
- e. Warnings will be canceled by the issuing agency when the expected criteria—
 - (1) Occurs and are not expected to occur again.
 - (2) Are not expected to occur if previously forecast.

3-7. Weather advisories

- a. Table 3-3 contains weather advisory criteria.
- b. The AWOC will issue observed advisories as the criteria specified occurs and cancel them when the criteria are no longer occurring.
- c. Advisories will be disseminated to—
 - (1) Agencies with an AWDS drop.
 - (2) The Fort Richardson COC (384-6666).

3-8. Operating limitations

The AWOC will provide all BAHF and Fort Richardson in-garrison weather support. The USARAK SWO (AWOC) and the 172 SIB (3 ASOS/WE) will collectively provide exercise planning and execution weather support, including operation order and operation plan support, as required.

Table 3-3 Fort Richardson weather advisories		
Criteria	Lead Time	Definition
High Winds (Note 2)	Observed	Surface winds, steady or gusting, equal to or exceeding 25 knots but less than 35 knots.
Wind (Note 2)	Observed	Wind gust spread between maximum and minimum instantaneous wind speed is 15 knots or greater.
Wind Shear (Note 2)	Observed	Drastic wind speed or directional change below 2,000 feet above ground level within 5 nautical miles.
Note 1: Each forecast weather advisory will state the criteria, the valid time, and the maximum value expected. Note 2: Thunderstorm presence implies the possibility of localized, strong, gusty winds and wind shear. No advisories will be issued for these events if their occurrence is forecast to be strictly the result of thunderstorms.		

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Section III

Reciprocal Support Responsibilities

3-9. Command Operations Center commander

The COC commander—

a. Maintains a list of telephone numbers of individuals and organizations needing notification of AWOC-issued weather warnings and advisories that affect Fort Richardson operations. See appendix B.

b. Notifies the AWOC/USARAK SWO when accidents, mishaps, and/or events occur in which weather, weather services, weather personnel, or weather resources are or may be involved.

3-10. Alaska Weather Operations Center commander

The AWOC commander—

a. Maintains Fort Richardson and BAHP meteorological watch and issues watches, warnings, and advisories using the criteria and lead times specified in tables 3-1, 3-2, and 3-3.

b. Coordinates all Fort Richardson or BAHP weather support requests (other than flight briefings and weather watches, warnings, and advisories) with the 172 SIB SWO.

c. Monitors the operating status of the automated weather observing station on BAHP. The AWOC will serve as a point of contact in facilitating repair of the Fort Richardson automated weather observing station, but will not be responsible for contracting or funding repairs.

3-11. Elmendorf Air Force Base Weather commander

The Elmendorf Air Force Base Weather commander will provide flight weather briefing service to the Alaska Regional Flight Center during periods when such service is available at Elmendorf Base Weather. During periods when this service is not available, the AWOC will provide the service.

3-12. Post Safety Office safety manager

The local Post Safety Office safety manager will notify the AWOC of all mishap investigations it undertakes if weather service or weather conditions might have played a part in the mishap's occurrence.

Chapter 4
Fort Greely and Allen Army Airfield Weather Support

Section I
Forecasting and Observing Services

4-1. Forecasting services

a. The Cold Region Test Center Meteorological Team (CRTC Met Team) provides general weather forecasts and advisory service from 0600L to 1530L, Monday through Friday and from 0800L to 1600L on weekends (when a meteorologist is on duty, November through March). Operating hours are subject to change due to local requirements. The Directorate of Plans, Training, Security, and Mobilization; USARAK Aviation will not issue a change to this regulation merely to revise the operating hours.

b. The National Weather Service issues forecasts during the Federal Aviation Administration Flight Service Station operational hours only (Fairbanks International Airport).

c. The 3 ASOS/WE is available for flight weather briefings during weather station duty hours. During nonduty hours, The AWOC is available to provide flight weather briefings for Fort Greely.

4-2. Observing services

The Big Delta Federal Aviation Contracted Weather Observation Office (874-4401) provides observations from 0600 to 2130, 7 days a week. At all other hours, an automated surface observation site provides data. They provide observing services from the vicinity of the Federal Aviation Administration Operations Building on AAAP. Wind equipment is on the approach end of Runway 06, and may not be representative of winds in other AAAP or Fort Greely areas.

4-3. Pilot to METRO service

AAAP does not have a PMSV. However, PMSV support is available within range limitations by calling Wainwright METRO at 342.5 MHz or Eielson METRO/Elmendorf METRO using 344.6 MHz. See the current Flight Information Publication for radio weather services available at AAAP.

4-4. Weather advisories

a. During forecasting operations hours only, the CRTC Met Team will issue weather advisories for Fort Greely. Obtain Fort Greely advisory criteria by calling the CRTC Met Team at DSN 873-1228.

b. The CRTC Met Team will telephone all advisories to Directorate of Plans, Training, Security, and Mobilization at 873-1209/4203 or the Fort Greely staff duty officer at 873-4720/4640.

4-5. Weather warnings

a. The AWOC will issue weather warnings when the criteria listed in table 4-1 are forecasted to occur at Fort Greely.

b. The AWOC will transmit the warning to the Fort Greely staff duty officer. The AWOC will also telephone the warning to the Fort Greely staff duty officer.

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Table 4-1 Fort Greely weather warnings		
Criteria	Lead Time	Definition
High Winds	1 Hour	Surface winds, steady or gusting, equal to or exceeding 35 knots.
Freezing Precipitation	1 Hour	Freezing rain or drizzle of any intensity.
Heavy Snow	2 Hours	3 inches or more in a 12 hour period
Note 1: Each weather warning will state the criteria, the valid period (in both Zulu and local time), and the maximum value expected.		

Section II Reciprocal Support Responsibilities

4-6. Cold Region Test Center Meteorological Team

The CRTC Met Team will issue weather advisories per local Fort Greely requirements. To get an itemized list of the advisory criteria, call DSN 873-1228.

4-7. Alaska Weather Operations Center commander

The AWOC commander—

- a. Provides flight weather briefing service for Fort Greely aviation when the 3 ASOS/WE is closed.
- b. Issues and disseminates weather warnings for Fort Greely 24 hours daily, 7 days a week, as specified above.

Chapter 5

**Staff Weather Officer Support to the United States Army Alaska and the 172d Infantry Brigade
(Separate)**

5-1. Staff weather officer

The AWOC commander serves as SWO to the USARAK staff. Additionally, the AWOC will serve as the provider of weather forecasts for the installation on Fort Richardson. The 3 ASOS/WE commander serves as the SWO to the 172 SIB and for units assigned to Fort Wainwright and Fort Greely. Also, the 3 ASOS/WE flight commander will provide or arrange for support to meet the tactical weather support requirements of units subordinate to USARAK and the 172 SIB that are located on Fort Richardson.

5-2. Staff weather officer responsibilities

a. The USARAK SWO—

- (1) Is responsible for providing weather support to the USARAK staff.
- (2) Is responsible for providing after-hours support to Fort Wainwright and WAAF.
- (3) Is responsible for providing weather-warning support and after-hours aviation weather support to Fort Greely and AAAF.
- (4) Is responsible for providing weather forecasts for the installation on Fort Richardson.
- (5) When requested, provides climatological and environmental support to USARAK.

b. The 172 SIB SWO—

- (1) Is responsible for providing weather support to the 172 SIB, Fort Wainwright, and WAAF.
- (2) Is responsible for providing aviation weather support to Fort Greely and AAAF during normal duty hours.
- (3) Is a member of the 172 SIB battle staff.
- (4) When requested, provides climatological and environmental support to the 172 SIB and subordinate commands.
- (5) When requested, provides weather safety and other pertinent topic briefings for units assigned to Fort Wainwright and Fort Greely.
- (6) Administers the Forward Area Limited Observation Point training program for 172 SIB and provides forward area limited observation point training for personnel per USARAK Regulation 115-3.
- (7) Upon request, provides nonweather personnel weather training for WAAF control tower personnel who require it.
- (8) Manages mobility training for 3 ASOS/WE personnel to ensure that they remain fully capable of deployment in support of USARAK and the 172 SIB.
- (9) Ensures pyramid recall rosters containing 3 ASOS/WE personnel data are provided to the—
 - (a) 172 SIB executive officer.

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(b) 4th Battalion, 123d Aviation Regiment executive officer.

(10) Provides temporary and permanent changes in Fort Wainwright garrison weather support duty hours to the AWOC and WAAF Airfield Operations. The 172 SIB SWO also notifies Airfield Operations of permanent changes for inclusion in the applicable Flight Information Publication.

(11) Provides standby forecasters and observers and other personnel, as needed, during nonduty hours when weather warnings are in effect or other mission-related requirements exist at Fort Wainwright.

(12) The SWO, through the 3 ASOS/WE commander, provides a quarterly analysis of the quality of environmental weather support to the following offices, if requested:

(a) 4th Battalion, 123d Aviation Regiment commander.

(b) Operations and training officer.

(c) Garrison commander.

5-3. Exercise support

a. The USARAK and 172 SIB SWOs provide support to exercises per applicable Army doctrine and the availability of personnel. Unless directed by higher headquarters, the USARAK SWO will support exercise requirements from the AWOC on Elmendorf Air Force Base and will not be required to provide manpower for deployed operations. Providing on-site weather support for deployed operations is the responsibility of the 172 SIB SWO. The USARAK and 172 SIB SWOs will coordinate their efforts to meet the exercise support requirements of USARAK, the 172 SIB, and subordinate units.

b. Any costs incurred due to weather personnel transportation or billeting is the tasking unit's responsibility, unless Air Force-funded billeting arrangements are made available to the SWO or the supporting weather team.

c. Due to shortfalls in staffing, equipping, or training there may be situations beyond 172 SIB SWO's control that may require a shortfall in either exercise support or garrison support. In these situations, the SWO will provide support to the highest priority mission as determined by USARAK and the 172 SIB commander.

5-4. Contingency support

The USARAK and 172 SIB SWOs provide support to contingencies per applicable war plans and as directed by the United States Air Force or higher headquarters.

5-5. Reciprocal support responsibilities

a. The 172 SIB commander—

(1) Provides training and administrative, logistical, and equipment support to garrison and field operations per AR 115-10. AR 115-10 is all inclusive and states that, in return for Air Force weather support, the United States Army provides communications capability, all required equipment (excluding weather sensors), logistical support, and training (both in the field and in-garrison). This includes temporary duty funds, as available, as requested by the 172 SIB SWO and approved by the 172 SIB deputy commanding officer or other USARAK units requesting weather support. This requirement also includes providing weapons, living and working areas, classified storage space, meals, and general storage space.

(2) Provides as much notice as possible (10 duty days minimum) to the 3 ASOS/WE whenever additional weather support is required for training or exercises.

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(3) Provides names and desired training date/time for those personnel selected as Forward Area Limited Observation Program personnel to the 3 ASOS/WE weather personnel.

(4) Realizes that weather support personnel are specially trained specifically for weather observing and forecasting and will not be available for other duties unless specifically approved by the senior Air Force officer or noncommissioned officer. Air Force weather personnel are under direct control of the 3 ASOS/WE commander both in-garrison and during deployments and exercises.

FOR THE COMMANDER:

OFFICIAL:

CHARLES R. DEWITT
COL, GS
Chief of Staff

//Original Signed//
WILLIAM F. HIGGINS, JR.
LTC, SC
Director of Information Management

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1 - 3d Operation Support Squadron/Weather Flight, 10460 L Street, Elmendorf Air Force Base, Alaska 99506-2835

1 - 354th Operation Support Squadron/Weather Flight, 1215 Flightline Avenue, Suite 2, Eielson Air Force Base, Alaska 99702-1520

1 - 611th Operation Support Squadron/Weather Flight, Alaskan Forecast Unit, 6900 9th Street, Suite 301,

Elmendorf Air Force Base, Alaska 99508-2270

1 - Federal Aviation Administration Big Delta, Post Office Box 1408, Delta Junction, Alaska 99737

1 - Commander, United States Army Pacific Command, Attention: APIM-OIR,
Fort Shafter, Hawaii 96858-5100

Appendix A**Fort Wainwright Weather Warning and Weather Advisory Dissemination System**

A-1. During WAAF forecasting service hours, the AWOC issues and disseminates weather warnings (excluding observed lightning warnings) and advisories to agencies having an AWDS drop. In addition, the AWOC notifies the Fort Wainwright EOC, which notifies other units per table A-1.

Table A-1 Fort Wainwright warning and advisory dissemination during duty hours								
Agency	Telephone	Wind 35 Knots	Freezing Precipitation	Snow ≥4 inches	Temp ≤-40 F	Lightning ≤5 miles	Snow ≥2 inches but <4 inches	ECT ≤-20 F
Aviation Battalion Operations Center	353-6195	X	X	X	X	X	X	X
Adjutant, Actions, 172 SIB	353-6602	X	X	X	X	X	X	X
Military Police	353-7536	X	X	X	X	X	X	X
Headquarters and Headquarters Company, 172 SIB	353-6690	X	X	X	X	X	X	X
Directorate of Public Works	353-7069	X	X	X	X	X	X	X
4/11th Field Artillery Regiment	353-1509	X	X	X	X	X	X	X
Medical Department Activity-Alaska	353-5100	X	X	X	X	X	X	X
408th Signal Company	353-0408	X	X	X	X	X	X	X
Legend: Temp—temperature; F—Fahrenheit ; ECT—equivalent chill temperature								

Note: Advisories for criteria unique to safety of flight (gust spread and wind shear) will be disseminated over AWDS directly to the control tower and flying organizations.

A-2. During 3 ASOS/WE nonduty hours, the AWOC issues weather warnings to the EOC by telephone. The EOC notifies the agencies listed in table A-2 of the weather warning's contents.

Table A-2 Fort Wainwright warning dissemination during nonduty hours					
Agency	Telephone	Wind 35 Knots	Freezing Precipitation	Snow ≥4 inches	Temperature ≤-40 F
Aviation Battalion Operations Center	353-6900	X	X	X	X
Adjutant, Actions, 172 SIB	353-6602	X	X	X	X
Military Police	353-7536	X	X	X	X
Headquarters and Headquarters Company, 172 SIB	353-6690	X	X	X	X
Directorate of Public Works	353-7069	X	X	X	X
4/11th Field Artillery Regiment	353-1509	X	X	X	X
Medical Department Activity-Alaska	353-5521	X	X	X	X
408th Signal Company	353-0408	X	X	X	X
Legend: F—Fahrenheit					

A-3. All organizations receiving weather warnings and advisories are responsible for notifying their special staff and subordinate elements. Unit commanders are responsible for developing further dissemination requirements and procedures.

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Appendix B**Fort Richardson Weather Warning and Weather Advisory Dissemination System**

B-1. During BAHP operating hours, the AWOC issues and disseminates weather warnings and weather advisories to agencies with an AWDS drop. In addition, the AWOC notifies the COC, which in turn notifies units listed in table B-1 during duty hours or table B-2 during nonduty hours.

Table B-1							
Fort Richardson warning and advisory dissemination during duty hours							
Agency	Telephone	Wind 35 Knots	Freezing Precipitation	Snow ≥3 inches	ECT ≤-20F	Lightning ≤5 miles	Wind 25 to 35 Knots
Directorate of Community Activities	384-2159/2017	X	X	X	X	X	X
Special Troops	384-0358	X	X	X	X	X	X
Range Control	384-6230	X	X	X	X	X	X
Transportation Motor Pool Dispatch	384-2720	X	X	X	X	X	X
Military Police	384-0823	X	X	X	X	X	X
Directorate of Public Works	384-1717/3670	X	X	X	X	X	X
Fire Department	384-0775	X	X	X	X	X	X
National Guard	428-6333	X	X	X	X	X	X
Legend: ECT—equivalent chill temperature; F—Fahrenheit							

Note: Advisories for criteria unique to safety of flight (gust spread and wind shear) will be disseminated directly to aviators during flight weather briefings.

B-2. During BAHP nonduty hours, the AWOC only issues weather warnings to agencies with an AWDS drop and by telephone to the COC. The COC then notifies the applicable agencies specified in table B-2.

Table B-2					
Fort Richardson warning dissemination during nonduty hours					
Agency	Telephone	Wind 35 Knots	Freezing Precipitation	Snow ≥3 inches	ECT ≤-20F
National Guard	428-6333	X	X	X	X
1st Battalion, 501st Parachute Infantry Regiment	384-0617	X	X	X	X
Special Troops	384-0320	X	X	X	X
Range Control	384-6233	X	X	X	X
Military Police	384-0824	X	X	X	X
Fire Department	384-0774	X	X	X	X
Legend: ECT—equivalent chill temperature; F—Fahrenheit					

B-3. All organizations receiving weather warnings and advisories are responsible for notifying their special staff and subordinate elements. Unit commanders are responsible for developing further dissemination requirements and procedures.

Glossary

**Section I
Abbreviations**

3 ASOS/WE.....	3d Air Support Operations Squadron/Weather Flight (Fort Wainwright Weather)
172 SIB.....	172d Infantry Brigade (Separate)
11 OWS.....	11th Operational Weather Squadron
AAAF.....	Allen Army Airfield
AFI.....	Air Force Instruction
AFMAN.....	Air Force Manual
AR.....	Army Regulation
AWDS.....	automated weather distribution system
AWOC.....	Alaska Weather Operations Center
BAHP.....	Bryant Army Heliport
chap.....	chapter
COC.....	Command Operations Center
CRTC Met Team.....	Cold Regions Test Center Meteorological Team
CWSO.....	Chief, Weather Station Operations
DA.....	Department of the Army
DD.....	Defense Department
DSN.....	Defense Switching Network
ECT.....	equivalent chill temperature
EOC.....	Emergency Operations Center
F.....	Fahrenheit
FM.....	Field Manual
IFR.....	Instrument Flight Rules
L.....	local (time)
MHz.....	megahertz
MSL.....	mean sea level

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para.....	paragraph
PIREPS.....	pilot reports
PMSV.....	pilot to METRO service
RCR.....	runway condition reading
RSC.....	runway surface condition
RVR.....	runway visual range
sec.....	section
SWO.....	staff weather officer
TAF.....	terminal aerodrome forecast
Temp.....	temperature
UHF.....	ultra high frequency
USARAK.....	United States Army Alaska
VC.....	vicinity
VFR.....	Visual Flight Rules
VHF.....	very high frequency
WAAF.....	Wainwright Army Airfield

Section II Terms

Alternate observing/forecasting site

A planned location for positioning weather personnel for continued observing and forecasting services in cases when the established weather station cannot be used. All elements of weather observations obtained while at the alternate observing site are estimated, except for temperature and dew point.

Meteorological watch

The process of monitoring the weather and informing supported agencies when certain established weather conditions that could affect their operations, or pose a hazard to property or life, are occurring or are expected to occur. This includes, but is not limited to, weather observation, forecast, warning, advisory, and pilot report encoding and dissemination.

Basic weather watch

A mode of operation in which official surface observations are taken by personnel whose duties include other essential tasks that detract from, or preclude, a continuous weather watch. Because of other duties and a location that does not allow a complete view of the runway complex, the observer cannot be expected to detect and report all weather changes as they occur.

Cooperative weather watch

A program enabling air traffic controllers and other nonweather personnel to assist in monitoring weather conditions. Responsibilities include advising pilots and weather personnel of actual weather conditions and differences from those reported in the latest official weather observation.

Desired lead time

The amount of advance notice a supported agency desires before a particular weather phenomena onset.

Freezing precipitation

Liquid precipitation (for example; rain or drizzle) that freezes on impact with any surface.

Terminal aerodrome forecasts

A forecast of required weather elements for a particular airfield covering a up to a 24-hour period. Forecast elements in the forecast's body refer to the area within 5 miles from the center of an airfield complex (See the respective chapters for each post for the area limitation of terminal aerodrome forecast (TAF) coverage). The term vicinity (VC), when used in a TAF, refers to the area between the outermost point of the TAF coverage to a point between 5 to 10 miles from the center of the airfield complex. No separate TAF is generated for Fort Richardson; forecasters at the Alaska Weather Operations Center tailor the Elmendorf Air Force Base TAF as required to support Bryant Army Heliport flying customers.

Terminal aerodrome forecast amendment

An unscheduled forecast that revises the existing forecast. It is issued because of significant changes in weather conditions that have occurred or are expected to occur.

Weather warning

A special notice provided to a supported agency when an established weather condition of such intensity as to pose a hazard to property or life is occurring, or is expected to occur, for which the supported agency must take protective action.

Weather advisory

A special notice provided to a supported agency when an established weather condition of less severity when weather criteria, such as light or greater icing, are occurring or expected to occur, for which the supported agency must take protective action.

Wind gust spread

The instantaneous differences between the minimum and maximum wind speed.

SIGMET/AIRMET

These are notices to air crews that are produced by National Weather Service and provide turbulence and/or icing advisories that could affect flights over a wide area. They are advisory in nature, and are not tailored to any particular aircraft type. A SIGMET is an advisory that effects all aviation. It is issued for significant weather conditions such as severe turbulence, icing, or an extensive area of thunderstorms that cannot be circumnavigated. An AIRMET deals with more moderate weather conditions such as moderate turbulence or icing, or instrument flight rules conditions like fog. The 3d Air Support Operations Squadron/Weather Flight receives SIGMETs and AIRMETs by communications circuits, and upon receipt, briefs all air crews concerning expected hazards. However, the 3d Air Support Operations Squadron/Weather Flight also tailors the information according to the route of flight, terrain, and aircraft type. Conditions briefed as part of an official flight briefing may be better or worse than the conditions portrayed in a SIGMET or AIRMET.